

REMARKS

This Amendment is in response to the Office Action mailed on February 25, 2010. Claim 19 is amended and is supported, for example, by claims 9 and 10. Claim 20 is new and is supported, for example, by claims 1, 16 and 17. No new matter is added. Claims 1, 4 and 7-20 are pending.

§103 Rejections:

Claims 1, 4, 7, 8, 12, 18 and 19 are rejected as being unpatentable over Gotoh (US Patent No. 6,071,391) in view of Hodges (WO 2003/032411) or Heller (US Patent No. 6,143,164). This rejection is traversed with respect to claims 1, 4, 7, 8, 12, 18 and 19. As claim 19 includes the features of claims 9 and 10, claim 19 is discussed below with respect to the rejection of claims 10, 11 and 13-17.

Claim 1 is directed to a thin analysis tool that recites, among other features, that the electron release region has a thickness between said one electrode and the second plate, and said one electrode and the second plate are spaced from each other by a facing distance that is no greater than the thickness of the electron release region.

The combination of Gotoh and Hodges or Gotoh and Heller does not teach or suggest the one electrode and the second plate are spaced from each other by a facing distance that is no greater than the thickness of the electron release region. Gotoh does not teach these features of claim 1. The rejection asserts that Gotoh has an electron release region, even though Gotoh is silent regarding an electron release region. However, even if Gotoh teaches an electron release region, Gotoh would likely have to provide both an electron release region and a non-electron release region between one of the electrodes and the plate facing the electrode, due to the distance between the plates 1 and 1' being between 100-500 μm (see column 7, lines 24-32 of Gotoh). Thus, it would not be obvious to modify Gotoh to require that one electrode and a second plate are spaced from each other by a facing distance that is no greater than the thickness of an electron release region based on the distance range of 100-500 μm between plates 1 and 1'.

Hodges does not overcome these deficiencies of Gotoh. Hodges merely teaches a spacing between two opposing electrodes 32 and 34 or 52 and 54 (see page 7, lines 28-

36, page 11, lines 11-19 and Figures 1 and 2 of Hodges). However, Hodges is silent as to a thickness of the electron release region above the electrode 32. Thus, Hodges also is silent as to a facing distance that is no greater than the thickness of the electron release region, as recited in claim 1.

Heller also does not overcome the deficiencies of Gotoh. The rejection relies on column 10, lines 38-54 of Heller for teaching a reaction space that is no greater than 45 μ m. However, this portion of Heller is directed to the diffusion of an analyte into the measurement zone. Heller is also silent as to an electron release region. Thus, Heller also cannot teach or suggest a facing distance that is no greater than the thickness of the electron release region, as recited in claim 1.

Further, requiring the facing distance, between one of the electrodes and the second plate, to be no greater than the thickness of the electron release region allows for diffusion of the electron transport mediator into the electron release region only from sides of the electron release region (see Figure 5B of the present application). Accordingly, the blood temperature and the hematocrit value will have less of an effect on the measurement, ensuring that the measurements can be accurately reproduced over a short measurement time span (see page 21, line 3-page 25, line 8 of the present application). Gotoh, Hodges and Heller do not contemplate these advantages, achieved by the features of claim 1.

Thus, not only are Gotoh, Hodges and Heller silent as to the features of "said one electrode and the second plate are spaced from each other by a facing distance that is no greater than the thickness of the electron release region", nowhere do these references contemplate the advantages achieved by requiring these features of claim 1. Accordingly, it would not be obvious to one skilled in the art to look to modify the biosensor of Gotoh to include the features of claim 1 based on the teachings of Gotoh, Hodges or Heller.

For at least these reasons claim 1 is not suggested by the combination of Gotoh and Hodges or Gotoh and Heller and should be allowed. Claims 4, 7, 8, 12 and 18 depend from claim 1 and should be allowed for at least the same reasons.

Claim 9 is rejected as being unpatentable over Gotoh in view of either Hodges or Heller and further in view of Leong (US Patent No. 6,837,988). This rejection is

traversed. Claim 9 depends from claim 1 and should be allowed for at least the same reasons described above. Applicant does not concede the correctness of this rejection.

Claims 10, 11 and 13-17 are rejected as being unpatentable over Gotoh in view of either Hodges or Heller in view of Leong and further in view of Nagakawa (WO 03/025558 and English equivalent US Patent No. 7,390,391). This rejection is traversed. Claims 10, 11 and 13-17 depend from claim 1 and should be allowed for at least the same reasons described above. Applicant does not concede the correctness of this rejection. As claim 19 includes the features of claim 10, claim 19 is discussed below.

Claim 19 is directed to a thin analysis tool that recites, among other features, said one electrode and the second plate being spaced from each other by a facing distance that is no greater than the thickness of the electron release region for causing diffusion of the electron transport mediator into the electron release region only from sides of the electron release region.

As discussed above, with respect to claim 1, Gotoh, Hodges and Heller, either alone or in combination, do not teach or suggest a facing distance that is no greater than the thickness of the electron release region. Moreover, neither Leong nor Nagakawa overcome these deficiencies of Gotoh, Hodges and Heller.

For at least these reasons the combination of Gotoh, Hodges or Heller, Leong and Nagakawa also does not teach or suggest a facing distance that is no greater than the thickness of the electron release region for causing diffusion of the electron transport mediator into the electron release region only from sides of the electron release region, as recited in claim 19. Accordingly, claim 19 should be allowed.

New Claim 20:

In order to expedite the prosecution of this matter, the following is noted with respect to new claim 20 as it relates to the cited prior art.

Claim 20 is directed to a thin analysis tool that recites, among other features, said one electrode and the second plate being spaced from each other by a facing distance that is no greater than the thickness of the electron release region for causing diffusion of the

electron transport mediator into the electron release region only from sides of the electron release region.

As discussed above, with respect to claim 19, Gotoh, Hodges, Heller, Leong and Nagakawa either alone or in combination, do not teach or suggest a facing distance that is no greater than the thickness of the electron release region.

For at least these reasons the combination of Gotoh, Hodges or Heller, Leong and Nagakawa also does not teach or suggest a facing distance that is no greater than the thickness of the electron release region for causing diffusion of the electron transport mediator into the electron release region only from sides of the electron release region, as recited in claim 20. Accordingly, claim 20 should be allowed.

Conclusion:

Applicant respectfully asserts that the pending claims are in condition for allowance. If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicant's primary attorney-of record, Douglas P. Mueller (Reg. No. 30,300), at (612) 455-3804.



Dated: July 26, 2010

Respectfully submitted,

HAMRE, SCHUMANN, MUELLER &
LARSON, P.C.
P.O. Box 2902
Minneapolis, MN 55402-0902
(612) 455-3800

By: _____

Douglas P. Mueller
Reg. No. 30,300
DPM/ahk